CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH
WALTER M. DICKIE, M.D., Director

Weekly Bulletin

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Practical Suggestions on After Care of Poliomyelitis

By Don King, M.D., and Frederick Bost, M.D., San Francisco

After the acute constitutional symptoms have subsided the muscles may remain tender and sore for several weeks. It is usually possible, however, to determine the muscle groups involved by the following tests: Abduction of the shoulder, by simply having the patient attempt to lift the arm from the side. Flexion and extension of the elbow, wrist and fingers, are tested in the same way. The power of opposing the thumb to the fingers should be tested as the opponens muscle is the most important intrinsic muscle of the hand. The flexor, and especially the abductor muscles of the hip should be tested by asking the patient to actively produce these movements. The quadriceps or extensor muscle of the knee is easily tested by lifting the extended leg and asking the patient to hold it up against gravity. The dorsal and plantar flexors invertor and evertor of the foot are easily tested in the same general way as outlined above. During the stage of muscle tenderness it is important that no massage or active exercise be given as such treatment prolongs the stage of muscle soreness. This does not preclude the application of dry heat such as bakes or hot water bottle to the affected parts. In fact, such applications are very gratifying to the patient. During this stage and subsequently, it is important that the involved extremities be supported in the physiological position for return of function. For the various joints the positions are as follows: first, *shoulder*—abductor weakness of the shoulder is best handled by keeping the arm supported in 90 degrees of abduction and externally rotated. This supports the weakend deltoid muscle in a position of relaxation and thus encourages return of function and prevents its stretching. Such a position is easily obtained in the early stages by the use of a towel around the flexed arm, tied to the head of the bed. *Elbow:* The best position for the elbow will depend somewhat on whether the flexors or the extensors show the most weakness. If the flexors are involved alone the elbow is to be kept in flexion. If the extensor alone, the position of extension is desirable. If both are involved a position of partial flexion is probably best. The ideal position for the arm, wrist, and fingers is easily arrived at in the same way; that is, if the pronators are weak, pronation is best; supinators weak, supination is the best position. If both are involved a position midway between the two; if wrist extensors, the hand should be kept in the dorsiflexed position, and this applies also to the fingers. If the opponens of the thumb is involved an attempt should be made to hold the thumb in a position of opposition. These positions for forearm, wrist and fingers are most difficult to maintain unless a splint either of plaster or metal is applied.

During the early stage the best position for the trunk is a quarter Fowler position, as involvment of the posterior muscles of the trunk is rare, while

involvment of the anterior muscles (abductors, hip flexors and so forth), is common. If the hip abductors have been found to be involved the patient's lower extremities should be kept well apart with pillows. Quadriceps involvment calls for a position of extension at the knee, which is easily maintained by not allowing the patient to have pillows under his knees. Dorsiflexion of the feet is maintained by the use of small pillows at the soles of the feet supported by sand bags.

The maintenance of the above described physiological positions prevents stretching of the affected muscles, and the development of contractures.

These principles, combined with the complete rest afforded by the patient's remaining in bed, form the basis for the treatment of the subacute stage of infantile paralysis. When the stage of muscle tenderness has passed, a detailed survey of the skeletal muscles is carried out. Every muscle is tested individually, and its strength graded. More permanent forms of support such as braces, plaster shells are fitted and active exercises, preferably under water exercises, started.

It is felt that this muscle survey and the ordering of splints should be under the direction of an orthopedist, and the physiotherapy should, if possible, be at least started by one who has had special training in this work.

We are now entering a period during which, with proper treatment, a great deal of functional recovery may take place. This period, during which the patient is kept in bed and actively treated, will vary considerably, but may last from six months to a year and a half. When it is felt that further recovery will be hastened by ambulation, the patient is gotten up, with braces if these are found necessary.

After the patient becomes ambulatory, in certain cases it is wise to carry on with the daily physiotherapeutic exercises.

When the patient enters the chronic phase of the disease in which it is felt that no further recovery of muscle function will take place he still has an opportunity for improvement by the use of certain orthopedic operative procedures. Among these should be noted the well known operation for stabilization of the foot, the transference and lengthening of tendons. By using such operations patients are often able to discard cumbersome braces.

Reference—"Care During the Recovery Period of Poliomyelitis," U. S. Public Health Bulletin No. 242.

Youth will never live to age unless they keep themselves in health with exercise, and in heart with joyfulness.—Sir P. Sidney.

GRAND JURY REPORTS OF NEW LAW

The San Francisco grand jury, which made its final report recently, offered suggestions for the better observance of the new law requiring physical examinations before marriage. Following is that portion of the report dealing with this subject:

"The California State Legislature, during its 1939 session, enacted a new law requiring pre-marital examinations of all persons applying for marriage licenses in the State of California. This follows in substance a similar law now in effect in several other states. Because this law is not universal, the result has been that many couples, in order to avoid the inconvenience and expense of such examinations, have gone to Reno to be married since the State of Nevada has no such law.

In the hope of preserving for San Francisco, not only the fees which properly belong to our city, but also to preserve for our hotels and other business people, the business incidental to weddings, Mr. van der Zee, our county clerk, is seeking suggestions as how best to do the following:

1. Convince San Francisco residents of the public benefits which should result from faithful compliance with this law.

2. To secure the co-operation of the medical profession in holding down the cost of such medical examination to a minimum and possibly a uniform fee. (We understand that at present, there is a great variance in amount of fees charged.)

3. To appeal to San Francisco residents on the basis of loyalty to their own State and city, to discourage advertisements urging Reno marriages and offering inducements of cheap and speedy travel with certain other perquisites.

The following figures show comparative number of marriage licenses issued in San Francisco from July to November, 1938, and from July 1, 1939, to date. It will be noted that August and September show an increase. This is due to the large number of couples anticipating the effective date of the law, which was September 19, 1939. A substantial loss begins in October, has continued and, in the opinion of Mr. van der Zee, will continue, unless practical means are found to avoid the heavy competition of Reno.

1938		1939	
July	510	July	557
August	611	August	672
September	557	September	676
October	461	October	304
November	279	November	188*

We recommend that our San Francisco public extend helpful cooperation to the County Clerk in this matter and discourage business firms who are seeking to profiteer along this line at the expense of our city."

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* 19 days.

AN INSTITUTIONAL OUTBREAK OF SCARLET FEVER

Dr. George Parrish, city health officer of Los Angeles, has released a report of an institutional outbreak of *hemolytic streptococci* (scarlet fever) by Dr. Hyman I. Vener, assistant epidemiologist, and Dr. George M. Stevens, epidemiologist, of the Los Angeles City health Department.

The report covers an outbreak of scarlet fever that occurred in a juvenile institution in March of 1939, in which approximately 32 per cent of the institution's population, which averaged 250 daily, was affected. The annual population turnover was approximately 4500 with an average stay in the institution of about 17 days for each child.

The outbreak was of an explosive nature, indicating the source in a common article of food. A number of older boys in the institution were delegated to serve as kitchen helpers, and it is quite probable that one of these kitchen helpers, who suffered from a mild case of scarlet fever or who was a carrier, was responsible for the contamination of some article of food that was served. Suspicion was directed toward ice cream, milk, custard, gelatin puddings, and cheese. It was impossible to determine which of these foods may have been responsible.

One of the boys, acting as a kitchen helper, but having a sore throat or who may have been suffering with a missed or clinical case of scarlet fever, might have contaminated the dessert by sampling it. Several of the boys admitted having drunk milk from the large service pitchers, which may have resulted in the contamination of the milk provided for the inmates of the institution. Since several who worked as helpers in the kitchen had otitis media, or parochynia, which, on culture, were positive for hemolytic streptococci, it is reasonable to assume that food products consumed by the children in the institution were contaminated through this source.

Recommendations covering the employment of a resident physician to make daily inspections of inmates, together with the employment of proper nursing personnel, segregation in clinics for all children residing in the institution and those from outside agencies, service of milk in individual properly capped bottles, proper protection for custards, puddings and similar products, discontinuance of inmate helpers as food handlers in the kitchen and instructions in the management of communicable diseases constituted the chief recommendations for the prevention of similar outbreaks.

The report of this outbreak is valuable, because it brings out the role played by the mild sore throat in the epidemic picture. Too often such factors, regarded as minor, are really of major importance in the production of disastrous epidemics. This report indicates careful and painstaking work in a difficult investigation.

DISEASES REPORTABLE IN CALIFORNIA

REPORTABLE ONLY

Anthrax
Beriberi
Botulism
Chancroid
Coccidioidal Granuloma
Dengue*
Epilepsy
Fluke Infection
Food Poisoning
Glanders†
Hookworm
Jaundice (Infectious)
Lymphogranuloma Inguinale
Malaria*
Pellagra
Pneumonia (Lobar)
Relapsing Fever
Rocky Mountain Spotted Fever
Septic Sore Throat
Tetanus
Trichinosis
Tularemia
Undulant Fever

ISOLATION OF PATIENT

Chickenpox
Dysentery (Amoebic)
Dysentery (Bacillary)
Erysipelas
German Measles
Gonococcus Infection
Influenza
Measles
Mumps
Ophthalmia Neonatorum
Psittacosis
Rabies (Animal)
Rabies (Human)
Syphilis
Trachoma
Tuberculosis
Whooping Cough

QUARANTINABLE

Cholera†
Diphtheria
Encephalitis (Infectious)
Leprosy
Meningitis (Epidemic)
Plague†
Acute Anterior Poliomyelitis
Scarlet Fever
Smallpox
Typhoid and Paratyphoid Fever
Typhus Fever
Yellow Fever†

*** Patients should be kept in mosquito-free room.**

† Cases to be reported to State Department of Public Health by telephone or telegraph and special instructions will be issued.

If one continues to ply one's mind, growth ensues, even in the years formerly supposed to be marked by stagnation and decay. To foster this growth one must not trust too much to the casual gains of every day work and experience. One must put forth well directed efforts. Merely to maintain one's status is not enough. He who is satisfied to stand still will soon slip backward. To grow one must go on learning. So it has come about that education, formerly thought to be an activity limited to the days of one's youth, is now seen in one form or another to be desirable in all periods of life. Thus one continues to improve; thus one keeps young.—Leon J. Richardson.

MORBIDITY

Complete Reports for Following Diseases for Week Ending December 9, 1939

Chickenpox

484 cases: Alameda County 3, Berkeley 3, Emeryville 1, Hayward 1, Oakland 19, Piedmont 9, Butte County 1, Contra Costa County 1, Pittsburg 2, Fresno County 5, Fresno 11, Kingsburg 1, Willows 2, Kern County 10, Bakersfield 2, Taft 1, Los Angeles County 26, Burbank 3, Culver City 1, Glendale 1, Inglewood 3, La Verne 1, Long Beach 9, Los Angeles 42, Manhattan 1, South Pasadena 2, Monterey Park 2, Madera County 1, Mendocino County 3, Merced County 9, Monterey County 18, King City 2, Monterey 18, Salinas 5, Orange County 4, Orange 2, Santa Ana 2, Laguna Beach 9, Tustin 1, Riverside County 4, Riverside 6, Indio 5, Sacramento County 3, Sacramento 6, San Benito County 1, San Bernardino County 10, Ontario 3, Redlands 2, San Bernardino 1, San Diego County 3, Escondido 2, La Mesa 2, Oceanside 3, San Diego 2, San Francisco 45, San Joaquin County 12, Lodi 1, Stockton 4, San Luis Obispo County 3, Arroyo Grande 1, San Mateo County 1, Burlingame 3, Daly City 2, San Bruno 1, San Carlos 1, Belmont 1, Santa Barbara County 2, Santa Barbara 3, Santa Clara County 1, Palo Alto 3, San Jose 8, Santa Cruz County 13, Solano County 5, Sonoma County 2, Stanislaus County 24, Modesto 1, Oakdale 1, Turlock 1, Sutter County 22, Tulare County 6, Lindsay 3, Porterville 1, Ventura County 12, Santa Paula 3, Ojai 7, Yolo County 1.

Diphtheria

36 cases: Berkeley 1, Los Angeles 7, Gardena 2, Madera County 2, Nevada City 1, Orange County 4, Santa Ana 1, San Bernardino County 1, San Bernardino 1, San Diego County 2, Chula Vista 5, National City 2, San Diego 4, San Joaquin County 1, Santa Clara County 1, Yuba County 1.

German Measles

16 cases: Berkeley 2, Contra Costa County 1, Los Angeles County 2, Long Beach 3, Riverside 1, San Diego 5, Oxnard 1, Yolo County 1.

Influenza

22 cases: Oakland 1, Butte County 1, Oroville 1, Los Angeles County 4, Los Angeles 7, Gardena 1, Mendocino County 1, Orange County 1, San Bernardino County 1, San Diego County 1, San Diego 1, San Francisco 2.

Malaria

4 cases: Kern County 2, San Diego County 1, California 1.*

Measles

227 cases: Fresno County 2, Fresno 1, Kern County 6, Taft 1, Los Angeles County 1, Inglewood 1, Los Angeles 17, San Fernando 12, Merced County 1, Santa Ana 4, Sacramento 1, San Diego County 3, National City 90, San Diego 71, San Francisco 5, San Joaquin County 1, Tulare County 8, Exeter 1, Oxnard 1.

Mumps

299 cases: Alameda County 4, Berkeley 13, Oakland 12, Piedmont 1, Butte County 2, Contra Costa County 1, Fresno County 3, Kern County 16, Bakersfield 7, Los Angeles County 17, Alhambra 2, Long Beach 9, Los Angeles 19, Montebello 2, Pasadena 9, San Fernando 1, Torrance 1, Monterey 1, Orange County 3, Santa Ana 1, La Habra 1, Placentia 1, Banning 3, Palm Springs 1, Sacramento 1, San Bernardino County 1, San Diego 4, San Francisco 24, San Joaquin County 3, Stockton 7, Tracy 5, San Luis Obispo County 2, San Mateo County 2, Burlingame 1, Daly City 2, Hillsborough 1, Redwood City 2, San Mateo 11, South San Francisco 1, Menlo Park 1, Santa Barbara County 1, Santa Barbara 5, Santa Maria 2, Santa Clara County 11, Mountain View 7, Palo Alto 12, San Jose 1, Santa Cruz 2, Sonoma County 3, Stanislaus County 1, Modesto 1, Oakdale 4, Sutter County 5, Tulare County 31, Yolo County 1, Davis 8, Yuba County 6.

Pneumonia (Lobar)

57 cases: Alameda County 1, Alameda 1, Berkeley 1, Oakland 1, Calaveras County 1, Coalinga 1, Fresno 2, Kern County 2, Lassen County 1, Los Angeles County 4, Azusa 1, Long Beach 2, Los Angeles 12, Pasadena 3, San Fernando 1, Monterey County 2, Monterey 1, Lincoln 1, Corona 1, Sacramento County 2, Sacramento 3, San Bernardino County 1, San Diego County 1, San Francisco 7, Palo Alto 1, Sonoma County 1, Oxnard 1, Salinas 1.

Scarlet Fever

209 cases: Butte County 11, Chico 1, Contra Costa County 1, Fresno County 3, Imperial County 1, Kern County 10, Lake County 2, Los Angeles County 22, Alhambra 1, Avalon 3, Glendale 4, Huntington Park 1, Inglewood 3, Long Beach 1, Los Angeles 29, Monrovia 1, Montebello 1, Pasadena 3, Pomona 6, San Fernando 1, Santa Monica 3, Sierra Madre 1, Lynwood 3, Monterey Park, 2, Merced 1, Monterey County 2, Napa 1, Orange County 3, Huntington Beach 1, Santa Ana 1, Riverside County 2, Beaumont 1, Riverside 2, Palm Springs 1, Sacramento County 1, Sacramento 3, San Bernardino County 1, Ontario 1, San Diego County 2, El Cajon 2, National City 1, San Diego 3, San Francisco 14, San Joaquin County 1, Stockton 1, San Luis Obispo 3, South San Francisco 1, Santa Barbara 4, Santa Clara County 1, San Jose 4, Shasta County 1, Vallejo 2, Sonoma County 1, Santa Rosa 1, Stanislaus County 1, Modesto 1, Sutter County 2, Tulare County 8, Exeter 1, Tulare 1, Ventura County 2, Fillmore 5, Oxnard 1, Santa Paula 2, Ventura 5, Yuba County 2, Marysville 1.

Smallpox

5 cases: Sacramento County 1, Sutter County 3, California 1.*

Typhoid Fever

5 cases: Berkeley 1, Los Angeles County 1, Long Beach 1, Stockton 1, California 1.*

Whooping Cough

157 cases: Alameda County 2, Fresno County 1, Fresno 5, Kern County 4, Bakersfield 5, Los Angeles County 24, Claremont 1, Long Beach 4, Los Angeles 10, Pasadena 3, Whittier 2, Lynwood 3, Merced 2, Fullerton 2, Orange 1, Santa Ana 2, Riverside County 2, Riverside 1, San Jacinto 1, Indio 3, San Bernardino County 1, National City 2, San Diego 4, San Francisco 18, Redwood City 2, Menlo Park 2, Santa Barbara 1, Santa Clara County 5, Palo Alto 4, San Jose 10, Sonoma County 7, Petaluma 3, Stanislaus County 8, Tulare County 7, Lindsay 1, Tulare 3, Davis 1.

Dysentery (Amoebic)

One case: Oakland.

Dysentery (Bacillary)

8 cases: Fresno County 1, Humboldt County 1, Los Angeles 3, Sierra Madre 1, Sacramento 1, San Francisco 1.

Pellagra

One case: Los Angeles County.

Poliomyelitis

20 cases: Oakland 1, Fresno County 2, Kern County 4, Bakersfield 1, Los Angeles County 2, Los Angeles 2, Monterey County 1, San Francisco 1, San Mateo County 1, Lompoc 1, Mount Shasta City 2, Sutter County 1, California 1.*

Tetanus

One case: Los Angeles County.

Trachoma

One case: Los Angeles.

Encephalitis (Epidemic)

One case: San Joaquin County.

Paratyphoid Fever

2 cases: Los Angeles County 1, Pomona 1.

Food Poisoning

88 cases: Los Angeles 74, Whittier 4, San Francisco 3, Sonoma County 7.

Undulant Fever

5 cases: Glendale 1, Ontario 2, South San Francisco 2.

Coccidioidal Granuloma

2 cases: San Fernando 1, Monterey County 1.

Septic Sore Throat

One case: Orange County.

Rabies (Animal)

5 cases: Fresno County 1, Imperial County 1, Los Angeles County 1, South Gate 1, Modera County 1.

* Cases charged to "California" represent patients ill before entering the state or those who contracted their illness traveling about the state throughout the incubaion period of the disease. These cases are not chargeable to any one locality.

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